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A Yoga-Based Curriculum To Help Learners Deal With Anxious Situations

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A YOGA-BASED CURRICULUM TO HELP LEARNERS DEAL WITH ANXIOUS SITUATIONS

by

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Abstract

Through my experience working in education, I have seen the many benefits that yoga can provide children. My observations led to my asking the following research question: *What are the elements of a Yoga curriculum that can support learners in dealing with anxious situations?* The review of the research literature supported my professional experiences in a variety of areas and the potential value of creating a four-week unit to be integrated into my third grade classroom. For example, it documented that anxiety is prevalent in children today and it does not simply disappear as those children grow into adults. The review of the literature also identified support for the idea that yoga and meditation are strategies that can help reduce anxious feelings. When taught correctly, yoga can help children who are experiencing anxious feelings. During my review of the research it was difficult for me to find a simple yoga curriculum geared toward middle elementary schoolers. That is why I created a four week yoga curriculum for third graders, with each lesson lasting approximately 10 minutes. The purpose and design of this curriculum project is to create support for any student who exhibits anxious behaviors whether or not they have an official anxiety diagnosis. Included in the curriculum are activities and formative assessments are included in this curriculum, along with a multitude of other resources. Through the development of this curriculum, I have learned how to combine appropriate yoga postures and meditation activities with a variety of engaging cooperative learning activities.

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CHAPTER ONE

Introduction

Children show up to my class with diverse academic, social and emotional needs. In my experience, some students have an official diagnosis of anxiety, and many others demonstrate anxious behavior throughout the school day. I have been a part of numerous conversations with veteran teachers who have commented on how much more anxious students are now than in the past. Supporting the observation of these veteran teachers is the American Psychological Association (2000), which reports that an average elementary school-aged child in the 1980s reported more anxiety than school-aged psychiatric patients in the 1950s. The increase in stress in students reported by both my peers and the American Psychological Association (2000) inspired the creation of my purposeful Yoga curriculum, that led to the following question: *What are the elements of a Yoga curriculum that can support learners in dealing with anxious situations?* It is important to address the existing stigma surrounding mental health and the challenges in teaching students who demonstrate anxious behaviors in order to understand the importance in creating this curriculum.

Coworkers have said, "What do these kids even have to be anxious about? They're just kids!" These coworkers hold a commonly held belief that being a child is not as stressful as being an adult. There is also a significant stigma surrounding mental health in our society that cannot be ignored when discussing and working with students who exhibit anxious behaviors. It can be challenging to teach students with anxious behaviors, since these behaviors often get in the way of their learning. Acknowledging

that students do experience anxiety and helping students manage their anxiety is therefore important and necessary.

This chapter will address students with anxious behaviors and existing concerns about the lack of ability to self-regulate amongst children. Yoga will then be discussed as a strategy, followed by my personal and professional experience that led to the development of this curriculum.

Students with Anxious Behaviors

Merikangas (2010) reports that anxiety is the most common mental health condition among children, with nearly 32% of adolescents in the United States having an anxiety disorder. Children with anxiety can exhibit physical symptoms (Hamilton & Ginsburg, 2018) such as headaches and stomachaches, when prompted will share thoughts of fear, and demonstrate a variety of behaviors, such as avoiding attending school, being afraid of being away from their parents, and social anxiety. Hamilton and Ginsburg (2018) also mention other common behaviors in their research, including fidgeting, licking lips, picking at skin, hair pulling, and nail biting.

It also important to remember that in addition to the 32% of adolescents in the United States having an official diagnosis of anxiety disorder (Merikangas, 2010), as a teacher I see many students in class exhibit the physical symptoms described by Hamilton and Ginsburg (2018). So the purpose and design of this curriculum project is for any student who exhibits anxious behaviors whether or not they have an official anxiety diagnosis.

The ultimate learning outcome of the implementation of this curriculum is that teachers, including myself, will have a new way of helping their student manage their anxious feelings and teach them to self-regulate.

Self-Regulation and Productivity Concerns

The development of self-regulatory skills is critical for success in the classroom because as Stosny (2011) explains in his definition of self-regulation it impacts emotions and behaviors.

> Research consistently shows that self-regulation skill is necessary for reliable emotional well being. Behaviorally, self-regulation is the ability to act in your long-term best interest, consistent with your deepest values. (Violation of one's deepest values causes guilt, shame, and anxiety, which undermine well being). Emotionally, self-regulation is the ability to calm yourself down when you're upset and cheer yourself up when you're down. (p. 1)

The violation described by Stosny (2011), be it in an academic or social context, means that children who are not able to self-regulate suffer. As a classroom teacher my goal is to create a learning environment where children are able to use strategies to relax themselves and keep control of their emotions to experience emotional well being. The intent of this project is to support my students in developing the skills to remain calm in the midst of emotionally challenging situations so that they can make healthy choices instead of being overwhelmed by what they are feeling.

The negative outcomes that result from a lack of self-regulation are documented in the the research (Hamilton & Ginsburg, 2018; Stosny, 2011) in addition to how a lack

of self-regulation causes issues with emotions. If stomachaches, headaches, avoiding school and social anxiety are occuring due to anxiety, it also shows a lack of self-regulation. These behaviors contribute to a lack of productivity at school. By creating a curriculum unit whose goal is reducing anxiety and increasing self-regulation the long term objective is to increase learner productivity in my classroom. Based on my review of the research (Kiecolt-Glaser, Oken, Sherman, Glowa, & Killen, 2013) for this capstone teaching students yoga practices can be useful in reducing anxiety and developing self-regulation skills.

Yoga as a Strategy

With such a large percentage of children experiencing anxiety (Merikangas, 2010), more needs to be done to help these students succeed in the classroom. Several studies (Kiecolt-Glaser et al., 2013) suggest that yoga helps relieve stress and anxiety by calming down the sympathetic nervous system. These studies support my decision to focus my capstone project on teaching yoga to students.

Yoga has been around for about 5,000 years, but has gained popularity in the West recently. There has been an increase of yoga participants since 2005, according to Mccall (2014) with over 30 million people practicing yoga on a daily basis. Hatha yoga, which is often practiced in the United States, combines various yoga postures, breathing techniques and often meditation at the end of class (Kiecolt-Glaser et al., 2013). Hatha yoga, as I have learned through professional experience, can be a useful strategy for children to use when feeling anxious.

Personal and Professional Experience

This topic means a lot to me on a professional and personal level. From 2013-2015, my job was in a high poverty school in a major metro area in the upper midwest as a special education paraprofessional. Riding the bus in with students with Individualized Education Plans (IEP) was an additional part of the job. The bus ride was often chaotic and loud, and many of the students I supported on the bus ride would have a hard time staying calm. While my role was supporting a group of students with IEPs during the ride, upon arrival at school many times I would also be anxious. My anxiety is noteworthy given there the lack of chaos in my own life it seemed that for me this should just be a bus ride to school.

Arriving at school I observed my students and those from other buses appearing to be dysregulated, frustrated, sometimes angry and almost always anxious. Once in the school building, the transition to breakfast and morning meetings in their classrooms would be a challenge for many of these students. It was not uncommon for the special education team to receive a call within fifteen minutes of entering the building about a student who left the classroom or was having an issue with their classmates or teacher.

Something clearly was not working. As a result of these tough mornings, in the fall of 2014, I had a conversation with the school counselor and social worker at my school about how we could provide a sense of calm for these students before their school day started. Attending a Yoga Calm training and learning about different strategies to try with children was a pivotal moment.

We decided to try incorporating a morning "breakfast and yoga club." Since I was the regular yoga class attender and had done the Yoga Calm training, we decided I

would lead the group of 18-20 students. We had one kindergartener and the rest were first grade-fifth graders. Students would arrive to the gym and eat their breakfast. After throwing their garbage from breakfast away, we would spend about 10-15 minutes doing different yoga postures (with music playing). At the end, our breakfast and yoga club members would lay on their backs or sit up and were invited to close their eyes and just breathe. Then, they would walk up to class with calm bodies, enter their classrooms quietly and join in the activity without issue. After just two short weeks of the breakfast and yoga club, the social worker, principal and I noticed fewer calls for disruptive behavior, and an overall calmer environment in the building.

In the fall of 2015, I began the year student teaching in a kindergarten classroom in a high poverty neighborhood. The nurse in our building would conduct a weekly yoga class for staff members to attend at the end of the day on Mondays. It was a really powerful experience for me to do yoga with this community of educators.

The day after I finished student teaching in December 2015, I started teaching full time in a fourth grade classroom. It was three months into the school year and my class had been through a lot before my arrival, going from substitute teacher to substitute teacher after their own teacher had walked out. It was a middle-class neighborhood with 25% of the students qualifying for free and reduced lunch, compared to 90% at my former school.

To be honest, I really did not expect to have a lot of students with anxiety and was surprised to find that a few had official anxiety diagnoses and others demonstrated anxious behaviors regularly. I started incorporating yoga into the day whenever if felt

like we needed it as a class. After transitions and before tests, we would either do slow breaths together with a breathing ball or a yoga pose. My students learned how to stand quietly in mountain pose and then would be asked how they felt after doing that. Students reported to me that they felt calmer and ready to learn. Some students used to write me notes in the morning or on the back of their spelling tests. One student wrote about how they liked being reminded to breathe and how it helped calm them down when music was played while we did yoga poses.

Doing yoga together really helped us connect as a community. Prior to starting the 2016-2017 school year, regular 5-10 minute yoga breaks were scheduled after recess every day. Currently, each day after recess, my students listen to a song and are invited to do yoga. On average, between four and ten students will join me and the others will sit and breathe, quietly read or watch. This is my third year having a scheduled yoga break.

Conclusion

With high stakes testing and increasing pressure from school districts and administration to raise test scores, teachers are pressured to fit in as much academic instruction as possible. I feel that it is important to take the time to address the anxious behaviors in our classrooms so that we are not wasting our time teaching students who can not give us their full attention.

The next chapter will provide a literature review. First, the focus is on childhood anxiety, by specifically researching what it is and how do you recognize it. The question "How is anxiety impacting children's development?" will be answered. Then, research about yoga and its benefits will be addressed . Research regarding how yoga should be

handled when done with children is the following topic. Then, existing yoga programs that have been already developed will be identified and analyzed. Lastly, I will include research on the importance of a positive classroom environment for students with anxiety.

The purpose of this curriculum is to help increase students' productivity and help decrease their anxious feelings and behaviors. The driving hope is that by spending 10-15 minutes of the day doing yoga movements and breathing exercises, there will be a decrease in anxious behaviors.

A secondary purpose to this curriculum is to create something that all teachers can use in their classrooms for years to come. Students experience anxiety in all environments. So while teachers in large urban school districts, like myself, could use this curriculum, teachers in more rural areas could also use it too. This curriculum will include lessons to follow that introduce and encourage learners to participate in yoga while using fun, kid-friendly language and poses. Rather than reinventing the wheel, the hope is for teachers to be able to use and tweak this curriculum to best serve their classrooms. The work in this literature review could be used for getting approval to integrate yoga into the curriculum, as well.

On a more serious note, anxiety in children raises long-term concerns as well. Anxiety can lead to substance abuse problems in the future, as well as depression and a higher mortality rate due to the link between anxiety and other health issues (Twenge, 2000). So while my project will take place in my third grade classroom, I am thinking of the long term effects that my students who experience high levels of anxiety could face

and how I can help them develop a habit they will continue to do long after they leave my classroom.

CHAPTER TWO

Literature Review

In this literature review, research on childhood anxiety will be reviewed. The definition of anxiety will be provided, along with data on how prevalent anxiety is in children. Research that has been done to figure out the causes of anxiety will be included, along with types of anxious behaviors that might be seen in the classroom. Literature on both the social impact and academic impact that anxiety has on student's achievement will be brought forth, followed by existing treatments for children who are diagnosed with anxiety. Existing strategies and modifications that are used for students with Individual Education Plans and 504 plans related to anxiety will be analyzed as well. These sections will bring to light how significant childhood anxiety is and why it needs to be addressed. Understanding these aspects of anxiety is critical in answering this question: *What are the elements of a yoga curriculum that support learners in dealing with anxious situations?*

Then, research was done that examined how effective yoga is as a strategy for those with anxiety. The overall benefits that yoga provides for children will be included. Literature will be shared that explains how yoga should be executed with children in a safe manner, including modifications and what to avoid. Other benefits that yoga provides children will be addressed as well. Following that section, existing yoga programs for children will be shared. Already-developed mindfulness activities that are proven to reduce anxiety in children will be included in this section as well. These

sections raise awareness about yoga as an existing tool for dealing with anxiety, which is critical for the development of the yoga curriculum.

What researchers have found makes a classroom climate positive will be examined in the remaining section. Research that supports the importance of having a positive classroom climate is for children with anxiety will also be presented. This section connects to both anxiety and the effect that yoga can have on a classroom. The final section defines self-regulation.

Overview of Anxiety in Children

The definition and prevalence of anxiety in students of all ages will be addressed in this section. Knowing what anxiety is eliminates common misconceptions about anxiety. Understanding how prevalent anxiety is in children emphasizes the importance of this capstone project, which is the development of a Yoga curriculum to help learners in dealing with anxious situations. The comorbidity of anxiety with depression and attention-deficit/hyperactivity disorder (ADHD) are also included in this section, to help readers understand that anxiety often is accompanied by other mental health issues. Having a complete understanding of the complexity of anxiety is necessary in the creation of this capstone project.

Dacey, Mack and Fiore (2016) define anxiety as a “silent affliction” and the feeling that you are endangered while being bombarded with feelings of self-doubt. They state that anxiety is much different than just fear or worry, though the words are often used interchangeably.

> In contrast, anxiety is a general frightened response to a source that is not readily identifiable. It could be the perception of a threat of what might have happened in the past or might happen in the future. An anxious child or adolescent may feel emotionally torn over some event which she cannot control. When a child is unable to think of a solution to the problem, their thinking becomes inflexible due to feelings of helplessness. In summary, anxiety is a response to events or people that pose no immediate threat, although to the individual they seem quite menacing. (2016, p. 5)

This feeling of a lack of control, or helplessness, is a common occurrence for many children.

Anxiety is the most common psychiatric disorder affecting children and adolescents, with over 30% of children meeting the criteria for an anxiety disorder before their 18th birthday (Kessler, Avenevoli, Costello, Georgiades, Green, Gruber & Merikangas, 2012; Weir, 2017). However, according to Ginsburg (as cited in Weir, 2017), anxiety in children is underdiagnosed, with the majority of these children never receiving treatment for their anxiety. Sometimes, children have mental health issues other than anxiety occuring at the same time.

For example, several authors note (Angold, Costello & Erkanli, 1999; Shepard, Carter & Cohen, 2000) how children with ADHD also are at a high risk of experiencing anxiety due to biological and environmental factors. ADHD is an externalizing disorder that is often addressed or noticed; it is important to note that these students often have anxiety as well (which is less obvious) to those working with the student. The connection

between ADHD and anxiety has also been referenced by Lowe (2000) who describes the comorbidity of anxiety disorders with depression in children. In addition to Lowe (2000), de Manicor (2017) has also reported how anxiety and depression are related to each other and often coincide. According to de Manicor (2017), when anxiety and depression coincide symptoms can overlap and have similar risk factors. The many factors that are causing increased anxiety in children will be discussed in the next section.

Factors Related to Increased Anxiety in Children

What has caused the high levels of anxious behaviors in children reported by Weir (2017) and Kessler et al. (2012). The review of the research literature conducted for this project identified three factors associated with high levels of anxious behavior in children. These include: biological, psychological and environmental. The biological factor will be described first.

Several authors (Dacey et al., 2016; Weir, 2017) describe how biologically, both genetics and gender, along with temperament, contribute to the risk of anxiety . Their research highlights how some children have a history of anxiety in their family, which increases their chances of developing anxiety, too. Specifically the research of Weir (2017) supports the idea that anxiety does run in families, with girls more likely than boys to develop it, and children whose parents have anxiety are more likely to develop anxiety. While genetics can explain why some children are more at risk of developing anxiety, science has also increased the understanding of how anxiety can impact the brain at a cellular level.

For example, Dacey et al. (2016) explain how for some children, anxiety is a result of hormonal imbalances and abnormal brain activity. Experiencing either of these atypical biological situations could be the reason a child has anxiety. Research by Ginsburg (as cited in Weir, 2017) has linked environmental factors with high levels of anxious behavior in children.

Children of parents with anxiety, according to Turner, Beidel and Costells (as cited in Wheatcroft, 2003) are seven times more likely than other children to have an anxiety disorder. One explanation of why parents with anxiety increases the chance of their children to have the disorder is provided by Ginsburg (as cited in Weir, 2017). According to Ginsburg (as cited in Weir, 2017) anxious parents sometimes model fearful behavior for their children.

According to these authors, the increase can be related to the way a parent interacts with their child. Even if parents are not modeling anxious behaviors, sometimes they accommodate and prevent their child from experiencing situations that might cause anxiety. So, if a parent is constantly coming to their child's rescue, they are limiting their child's chance to develop strategies and skills to cope with anxiety surrounding stressful situations. .

Environmental factors are also significant when it comes to identifying the causes of a child's anxiety. Weir (2017) describes how trauma, various forms of abuse and other stressful events early in a child's life can cause anxiety. Twenge (2000) adds that another environmental factor that can contribute to anxiety is a lack of social connectedness and perceived high environmental threat have contributed to anxiety. That is, children do not

feel connected to their peers and are instead isolated. They are afraid of their surrounding environment and do not form close relationships with their peers. Other environmental factors identified by Dacey et al. (2016) that can contribute to anxiety are unexpected noises, supernatural beings, getting lost or separated from loved ones, being alone at night, attending school, rejection by specific peers, failure, becoming sick and real-life catastrophes also causes anxiety among school-aged children). These concerns and fears can lead to a variety of anxious behaviors and symptoms in children.

The third factor that leads to high levels of anxious behavior is the psychological factor. Psychological causes of anxiety result from upsetting experiences. Dacey et al. (2016) provide the example of a child falling off a tricycle. Most children would find this upsetting, but a child with a "high-wired nervous system" could start to view tricycles as something to fear. Psychological factors affect how children perceive and think about the world (Dacey et al., 2016). A child with anxiety will be very sensitive to the possibility of danger and therefore, their mind is constantly alert. This makes it hard for them to relax. Behavioral inhibition is another common behavior that can lead to anxiety in children.

According to research from Kagan (as cited in Weir, 2017), children under the age of three who are behaviorally inhibited are more likely to show anxious behaviors throughout childhood. These children will not explore their environment, cling to parents, and are quick to hide. Evidence indicates that introversion, behavioral inhibition and high levels of neuroticism put a child at risk of developing an anxiety disorder (Vreeke &

Muris, 2012). Children whose personalities are more introverted and shy are more at risk of developing anxiety than children who are outgoing and take risks.

Environmental factors are also significant when it comes to identifying the causes of a child's anxiety. Trauma, various forms of abuse and other stressful events early in a child's life can cause anxiety (Weir, 2017). Also, a lack of social connectedness and perceived high environmental threat have contributed to anxiety (Twenge, 2000). That is, children do not feel connected to their peers and are instead isolated. They are afraid of their surrounding environment and do not form close relationships with their peers. Unexpected noises, supernatural beings, getting lost or separated from loved ones, being alone at night, attending school, rejection by specific peers, failure, becoming sick and real-life catastrophes also causes anxiety among school-aged children (Dacey et al., 2016). These concerns and fears can lead to a variety of anxious behaviors and symptoms in children.

Anxious Behaviors and Symptoms

Behaviors and symptoms of anxiety are vast. Anxious behaviors present in different ways. According to Vreeke and Muris (2012), behavioral inhibition correlates with anxiety. A child with behavioral inhibition hesitates to explore their environment and tends to be more vulnerable. Two personality traits that contribute to behavioral inhibition and therefore anxiety are high levels of neuroticism and low levels of extraversion. Neuroticism refers to being moody and emotionally unstable and extraversion refers to being outgoing and friendly.

Symptoms of anxiety vary for children. Children with anxiety often feel overwhelmed by worry and some experience headaches and stomachaches. Some experience, according to Weir (2017), social phobias, such as being afraid to attend a birthday party. Other symptoms identified by Dacey et al. (2016) include hyperventilation, increased heart rate, sweating, tense muscles, feeling faint or dizzy, dry mouth, higher pitched voice, feeling nauseous and more. These symptoms and behaviors are significant and can be limiting. This is why it is important for educators to help our students limit their anxious behaviors and thoughts when they are in our classrooms by incorporating yoga into the day. These symptoms of anxiety can have a significant social impact at school.

Social Impact at School

Anxiety impacts students socially while they are at school (Mychailyszyn, Mendez, & Kendall, 2010). Elaborating on two of the impacts of anxiety on the social aspect of school are Scharfstein, Beidel, Alfano and Sarver (2011) and Watson et al. (2014). According to research from Scharfstein et al. (2011), children with anxiety disorders often have fewer friends than those without anxiety. There are other factors associated with anxiety that may contribute to this decrease in social relationships.

Greco and Morris (as cited in Green et al., 2017) reported that students with anxiety have poorer social skills and are less accepted by their peers. For example, they have trouble initiating interactions with other people, are less assertive and also feel lower self-worth (Watson et al., 2014). As a result, situations in which they have to speak in front of the class, read aloud, perform, join conversations, take tests, ask the teacher a

question, and transition between places cause students significant anxiety (Green et al., 2017). Students with these limitations do not connect with their classmates as often because the child with anxiety is stuck in their head and not interacting as much with classmates.

Anxious students, according to Hazelle and Shell (2017), are more likely to be unable or unlikely to defend themselves against others' words or actions as well, being more prone to peer victimization. They lack some of the social skills and confidence to stand up for themselves, and they worry that if they do stand up for themselves, what might be the social ramifications of that action. Also, these children often perceive themselves negatively and also perceive their relationships with others negatively (Lowe, 2000).

As was mentioned in the previous section, social phobias cause some children with anxiety to avoid activities outside of school, like birthday parties. If a child is avoiding key social events, like Weir (2017) mentions, they are ultimately missing out on social skill opportunities and chances to connect with peers. Anxious children want to play with their peers, but are blocked by social anxiety. So instead of asking a friend to play, they will avoid them. They might want to approach their peers but are afraid (Hazelle & Shell, 2017).

It is important to mention that children with anxiety have a hard time sticking to commitments as a result of avoidance behavior and also are hesitant to try out adventurous undertakings or expose themselves to new situations (Vreeke & Muris, 2012). This reluctance often leaves these children in the dust while their peers share fun

and new experiences together. Green et al. (2017) supports this claim by stating that the avoidance of social situations provides these children with fewer chances to practice interpersonal interactions.

The social piece of school is extremely critical to a child's development and does not always get as much attention in today's society as academics. But in order for a child to be a functioning member of society, they need to be able to socialize and work through their social issues. That is why educators need to help. By limiting these behaviors and thoughts, children are better able to socialize. Anxiety can also negatively impact children on an academic level.

Impact of Anxiety on Academics

Two research studies (Mychailyszyn et al., 2010; Green et al., 2017) describe how anxiety disorders are connected and associated with an increased risk for negative educational outcomes. These studies support the fact that students with anxiety are more likely to struggle academically as a result of that anxiety. Grover, Ginsburg and Ialongo (as cited in Lowe, 2000) completed a study in which 1,197 first graders were assessed. The researchers found an inverse relation between anxiety and academic success. Lowe (2000) continues that children with higher levels of anxiety performed worse academically in both mathematics and reading. The author also noted how four years later, children in their study with higher levels of anxiety " . . . were ten times more likely to be in the lower one-third of their class academically" (p. 16).

As mentioned in the previous section, speaking in front of the class and asking teachers question can be anxiety-inducing, and therefore avoided. The academic fallout

from these fears could be detrimental. Avoiding asking for help when help is needed means that a child is not consistently getting their academic questions answered, impacting their learning. Classroom discussions, group work and even show-and-tells can be intimidating for children with anxiety. Further, Hughes and Coplan (2017) have found worrying about how they are perceived by others can interfere with a child's ability to engage in classroom activities. Children have to engage in learning activities to learn; simply being a bystander inhibits a child's ability to learn concepts.

Cognitive features of anxiety include attention and concentration challenges (Lowe, 2000). A lack of concentration would make it hard to participate and learn. Furthermore, McCall (2007) found that stress often causes problems with memory; also, hyperactivity and attention issues can make it very difficult for a child to focus on and benefit from instruction. So if a student is experiencing stress due to anxiety, they will have a hard time retaining new information and remembering strategies, facts and more. If a child is anxious and also hyperactive, learning would be even more challenging.

Students with anxiety are also more likely to be absent from school. Teaching does not stop when a child is absent. Critical instruction and discussion occurs without that child there to learn from it. Anxiety also causes cognitive problems, specifically issues with concentration. Lack of concentration can be detrimental to a child's ability to learn. If a child cannot concentrate, they cannot absorb new information. Green et al. (2017) also note how behavioral problems occur as well, including feelings of restlessness and limited participation in the classroom.

Strategies for Addressing Anxiety in Learners with 504 plans and IEPs

Some students have Individualized Education Plans (IEPs) or 504 plans that require school-based supports, services and accommodations for anxiety (and often, another disorder, such as ADHD). Green et al. (2017) completed a study in which 51 children and adolescents with anxiety, who were seeking treatment for anxiety, were interviewed. About 57% of those children reported that anxiety interfered with at least one aspect of functioning at school (academic or social specifically). Over one-fifth of the students said they had difficulty paying attention in class due to their anxiety (Green et al., 2017). These children shared that they had permission to leave class when necessary and received extra time on tests and assignments. Their mothers shared that their children received one-on-one or group counseling while at school and a "safe place" to go when escalated or upset (Green et al., 2017).

This study found that not much was being done for these students in terms of helping their social limitations. The children and mothers reported during the interviews that children who had trouble making and playing with friends were not any more likely to participate in a lunch group. They also reported that children who have a hard time speaking in front of the class were not more likely to practice rehearsing. It is important to note that this is from a child's perspective, and children perceive things differently. They do not often know what's going on with other classmates. Also, mothers are not at school to know what is happening at lunch either. That being said, strategic lunch groups and rehearsing ahead of time would be two things that would benefit children with

anxiety. According to children interviewed, Green et al. (2017) reports they (and other children who had a hard time speaking in class) were more likely than others to receive a special "cue" to communicate with their teacher .

Green et al.'s (2017) study brings to light how vague IEPs and 504 plans can be in terms of addressing a child's anxiety diagnosis. Also, one accommodation in particular conflicts with clinical best practices. Pincus and Friedman's findings (cited by Green et al., 2017) show that

> . . . [A] number of cognitive-behavioral interventions for anxiety discourage avoidance/escape and instead aim to support youth in developing adaptive coping skills to use while confronting their anxiety through graduated exposure practices. [So] the current finding that one third of children reported having special permission to leave the classroom when they felt anxious (and almost half of youth involved with IEP/504 plans reported this accommodation) raises questions about whether school-based supports for anxious youth might inadvertently conflict with clinical best practices. (p. 229)

This avoidance behavior is not the only accommodation that is being supported by schools, while not being best practice.

Another accommodation, which is extended time on tests and assignments, has been found to be ineffective as well, with some studies finding this extended time to improve how students feel about testing, with no improvement on test results. Green et al. (2017) conclude in their study that it is necessary for mental health providers to connect with school professionals and inquire about the accommodations and supports in

place. Unfortunately, it is apparent through Green et al.'s research (2017) that this is not happening on a consistent basis. It is important, therefore, to understand treatments that help children who are diagnosed with anxiety.

Existing Treatment for Addressing Childhood Anxiety

There are various treatments that exist today for anxiety, including cognitive-behavior therapy (CBT). According to Psychology Today, CBT "treats problems and boosts happiness by modifying dysfunctional emotions, behaviors and thoughts . . . CBT focuses on solutions" (p. 1). The primary components of the majority of CBT programs for anxiety disorders, according to Kendall (2006), include psychoeducation, cognitive restructuring, exposure to anxiety-provoking situations and social skill training. Overall, group CBT is considered helpful for treating social issues of children with anxiety. Liber et al. (2008) explained that reinforcement is provided, along with modeling from peers and a therapist, and the children are able to practice social interactions.

In one of the first books about CBT, Meichenbaum (1977) stated that self-observation is the heart of cognitive-behavior therapy:

> The first step in the change process is the client's becoming an observer of his own behavior. Through heightened awareness and deliberate attention, the client monitors, with increased sensitivity, his thoughts, feelings, physiological reactions, and/or interpersonal behaviors. As a result of the translation process that occurs in therapy, the client develops new cognitive structures (concepts) which permit him to view his symptoms differently. Attending to one's

> maladaptive behaviors takes on a different meaning – a meeting that contributes to a heightened vigilance or "raised consciousness." (p. 219)

One study examined by Mendlowitz et al. in 1999 was a 12-week group-based CBT intervention that included parental involvement.The 90-minute weekly intervention focused on self-monitoring anxious feelings, relaxation exercises and learning how to use effective coping strategies. Another study by Tobon, Eichstedt, Wolfe, Phoenix, Brisebois, Zayed and Harris in 2011 examined a 12-session, 90-minute weekly CBT group intervention that focused on relaxation strategies and exposure. Both studies focused on cognitive restructuring. Results showed significant reduction in anxiety for participants in both studies (Watson et al., 2014). These results from both studies demonstrated that explicitly teaching and practicing relaxation strategies was beneficial for reducing anxiety in participants.

A study by Watson, Rich, Sanchez, O'Brien and Alvord (2013) examined the effectiveness of a resilience-based CBT program called the Resilience Builder Program. This program focused on building resilience-based skills, such as proactive social problem solving, developing one's own special skills and learning how to be flexible and adaptive in situations (Watson et al., 2014). They found it to improve anxious children's social and emotional functioning. An interesting piece to the findings is that the most significant improvements were seen by the children's teachers. Watson et al. (2014) reported that teachers saw great improvements emotionally and socially for these children.

Medication, such as Sertraline, is also used to treat children with anxiety. In the Child/Adolescent Anxiety Multimodal Study, treatments were compared by psychologists among 488 children and adolescents with anxiety. These children were either receiving sertraline, CBT, a combination of the two or a placebo. Sixty percent of children who were receiving either sertraline or CBT improved, with only 20% of the placebo group improving. Eighty percent of children who received both CBT and sertraline improved (Weir, 2017) though 50% of children's anxiety had returned six years later.

Rubin and Chronis-Tuscano (as cited by Weir, 2017) have developed an eight-week-long intervention in which children who are socially inhibited are able to practice interacting with peers in small groups. They practice a variety of skills, including introductions, eye contact, playing games together and also expressing how they feel. The study is ongoing but the results so far are promising, with lower social inhibition and anxiety reported by parents of children participating in the intervention. Rubin and Chronis-Tuscano (as cited by Weir, 2017) state that "Children need to interact with other children to become socially and cognitively aware"(p. 50).

Attention-bias modification is another intervention that exists today and is being studied by psychologist Silverman (as cited by Weir, 2017). This intervention was created with the knowledge that people with anxiety are overly aware and tuned-in to "potentially threatening stimuli" surrounding them. This intervention is a computer game that trains children to avoid the negative and focus on the neutral.

Dacey et al. (2016) reports that while medications can be helpful for some children, studies have shown that 90% of all anxious children benefit from learning

various coping skills (2016). They have created a program called COPE, which stands for **C**alming the nervous system, **O**riginating an imaginative plan, **P**ersisting in the face of obstacles and failure and **E**valuating the plan. COPE, specifically the importance of calming the nervous system, will be looked at further in the Existing Yoga Programs for Kids section of this literature review.

Teachers are unable to prescribe medication or have their students complete CBT in their classrooms. This is why it is important for teachers to look at other options, like yoga. In the next section, literature that shows the impact untreated anxiety can have on children will be examined.

Impact on Learners with Untreated Anxiety

There is a common belief that children will simply outgrow their anxiety symptoms, according to Silverman (as cited by Weir, 2017), but research evidence does not support that belief. Without treatment, anxiety often continues into adulthood. According to Weir (2017)

> Without treatment, childhood anxiety is likely to persist, negatively affecting a child's social and family functioning and overall quality of life. Anxiety disorders increase the risk of adult disorder, including future anxiety as well as depression, substance use disorders and suicide, according to data from more than 9,000 respondents in the National Comorbidity Survey Replication, reported by Ronald Kessler, PhD at Harvard, and colleagues. (p. 50)

This research shows that something needs to be done to help children learn how to deal with their anxiety so it does not lead to more serious issues later on.

For most children, anxiety is a common and functional experience. According to Keller and other researchers (as cited in Wheatcroft, 2003), approximately 46% of children between the ages of 6 and 19 with an anxiety disorder would still have issues eight years later. What can be done to help reduce this? Teach children how to manage their anxiety. Yoga is one strategy that both adults and children use to manage their anxiety.

Yoga: Overview

According to Neiman (2015), yoga offers three major experiences: slow movements that calm the mind and release built-up tension, breathing that helps regulate a child by impacting their parasympathetic nervous system and also postures (in yoga, referred to as "asanas") that help focus a child. Deep breathing exercises relax the mind as well as the body. Neiman (2015) has found that as an occupational therapist (OT) working with children for over 30 years, children really love being on the floor, moving their bodies and relaxing through yoga.

Yoga originated in India over 2,000 years ago. "Hatha yoga" and yoga are generally interchanged and thought of as the same thing in the United States. Yoga practice consists of 84 different postures. While holding a yoga pose, the person practicing yoga is supposed to concentrate on how the body feels on the inside and outside, while also focusing on the breath.

Yoga often ends with a relaxation or meditation period (Malik, 2008). Neiman (2015) states that meditation is a focusing activity that is directed to the breath, words or even the absence of sound. It places the mind at the center of health and well-being. The

goal of yoga is the holistic balance of both a person's physical and mental health. Yoga includes multiple facets, according to de Manicor (2015), beginning with physical postures and movement (asana), incorporating breathing exercises (pranayama), and ending with relaxation, mindfulness and meditation.

Yoga includes a mindfulness component, too. Mindfulness is defined by Kabat-Zinn, who is the creator of Mindfulness-Based Stress Reduction, (as cited in Edmunds, 2013) as "the awareness that emerges through paying attention on purpose, in the present moment, and nonjudgmentally to the unfolding of experience moment by moment" (p. 143) This definition is very similar to what Meichenbaum (1977) wrote about CBT. They both work toward focused awareness. Being mindful has been proven through research to be highly associated with improved health and is a vital part of yoga (Shelov & Suchday, 2009).

While the amount of research on children and yoga is limited, Malik (2008) reports that those in the yoga community believe that the benefits of coping skills, higher self-esteem, decreased stress, anxiety and depression are likely comparable for children. The following sections will look at the physical, behavioral, mental and emotional benefits of yoga for children.

Engaging in Yoga: Physical Benefits for Children

There are numerous physical benefits that yoga provides. To begin with, yoga is a form of exercise. Children should move their bodies every day because it benefits them while they are at school. Rich (2010) cites Jensen, Hannaford and Richards' separate findings that show exercise improves behavior and academic performance. This is

because movement stimulates brain function. Specifically, neural connections and cerebral blood flow increases. Other benefits of physical activity are noted by several researchers (Hillman, Castelli, & Buck, 2005; Ortega, Ruiz, Castillo, & Sjostrom, 2008). These benefits include improves cognition, reduces stress and increases academic achievement.

Researchers (IOM, 2013; Ortega et al., 2008) have found that children who are more active physically show more attention to tasks, process things faster, and have higher self-esteem. Yoga gives them the necessary movement that contributes to these benefits. For the purpose of this section of the literature review, the focus will be on the health benefits of yoga. McNealus (2016) describes yoga as an activity that specifically increases strength and flexibility for the body. By practicing a variety of yoga postures, children will become stronger physically and more flexible.

Furthermore, Hagan and Nayer (2014) say that yoga calms the heart rate, which signals to the brain to awaken the parasympathetic nervous system. The parasympathetic nervous system, when activated, increases a person's ability to focus and learn. On the contrary, the sympathetic nervous system, or fight or flight, can be engaged when students are experiencing sensory overload. Yoga reduces sympathetic activity (Hagan & Nayer, 2014). So, when children practice yoga, they feel more calm.

There are a variety of other physical benefits for those who practice yoga. For instance, McNealus (2016) notes how breathing practices that are a part of yoga improve oxygen intake, which benefits children with asthma. The author also mentions that yoga causes a decrease in headaches and stomach aches, less constipation, and reduced sinus

problems. Another benefit of Yoga, identified by McNealus (2016) is how it can help with sleep and digestion as well (2016).

Engaging in Yoga: Behavioral, Mental and Emotional Benefits for Children

Additional benefits that doing yoga provides children will be highlighted in this section. The three primary benefits will be physical activity, mental benefits and emotional benefits.

Physical activity in general helps children get their "wiggles" out and benefits children behaviorally. But yoga specifically helps children with a more serious behavior: aggression. McNealus (2016) states that yoga helps reduce aggression in children by decreasing anger. Students show aggression when they are agitated or angry. With decreased anger and the sense of calm that yoga practice brings, aggression decreases.

Abadi, Madagoankar, and Venkatesan (2008) examined how two 45-minute yoga sessions a week impacted 45 children aged 9 to 12 who were diagnosed with ADHD. The study was eight weeks long; it was found that students were better able to handle stressful situations and calm themselves down, providing evidence that yoga has a positive impact on children with ADHD. According to the authors, students in their study were able to "carry out their duties, being more attentive and remain relaxed (2008, p. 155). Literature also suggests that yoga performed with children can decrease impulsivity (Malik, 2008). Jensen and Kenny (2004) looked at children with ADHD who had issues with self-regulation and hyperactivity. This study was done with only boys and the ADHD symptoms of hyperactivity and impulsivity were reduced after doing yoga.

Yoga benefits students mentally as well. According to Neiman (2015), yoga can be used as a tool to both stimulate and calm students. That means that yoga can wake children up and relax them, resulting in a balanced feeling. Yoga helps improves focus and increases attention. According to Hagan and Nayer (2014), practicing yoga improves concentration in children. This improved focus and attention often results in improved academic performance.

In a study, 10 elementary school students practiced yoga twice a week for three weeks. These students were identified by teachers for their short attention spans. According to Peck, Kehle, Bray and Theodore (2008), results of the study indicated that with yoga being implemented during the week, they were able to spend more time on task afterward. The research also found that one hundred percent of students shared that they felt they could focus more after doing yoga. This is important to mention; while reflecting, those children recognized how useful yoga was for them in improving focus.

Furthermore, yoga helps children calm their minds. In society today, children are exposed to non-stop stimulation through technology. Yoga practices stop that external stimulation. McNealus (2016) states that practicing yoga helps children calm their minds and give them a break from increasing digital stimulation.

Yoga helps students deal with the emotional toll of stress in a healthy way. According to Hagan and Nayer (2014), yoga reduces stress levels in children. High stress levels often lead to other health problems, including anxiety, which will be addressed in more detail in the next session. Other health implications include insomnia,

muscle pain, high blood pressure and sometimes weakened immune systems (Hagan & Nayer, 2014).

Yoga helps reduce feelings of depression. McCall found (as cited in Rich, 2010) that yoga activates the left prefrontal cortex, which corresponds with higher happiness levels, a calmer temperament that isn't easily angered or flustered, and a more mentally flexible outlook on life. Malik (2008) found that yoga can improve self-worth as well.

Yoga increases mindfulness and helps children balance themselves emotionally. To add on, researchers Hagan and Nayer (2014) and Malik (2008) have found that yoga improves self-regulation skills related to emotions and stress. Children who practice yoga often become more confident, too. Yoga is non-competitive, which takes out the emotional side-effects of losing. Literature from Malik (2008) also suggests that yoga decreases body dissatisfaction, which relates to self-esteem.

Yoga and Anxiety Reduction

Research (Hagan & Nayer, 2014; de Manicor, 2017; Neiman, 2015) has found that yoga reduces anxiety in children and adolescents. In one particular study (Gustat, Anderson & Hylton, 2018), researchers worked with third graders with anxiety symptoms to add yoga (including mindfulness) to a school's empathy-based program. They found that students who were exposed to the yoga component had improved well-being and emotional health (Gustat, et al., 2018).

According to Kirkwood, Rampes, Tuffrey, Richardson and Pilkington (2005), exercise is beneficial for people with severe anxiety. Berger and Owen (as cited by Kirkwood et al., 2005) looked at the effects of swimming, fencing, body conditioning and

yoga classes and found that the yoga group was the only group to show a significant reduction in anxiety.

A key aspect of yoga is to control breathing to calm the mind. As was previously mentioned, stress awakens the sympathetic nervous system (fight or flight). People with anxiety often restrict their muscles surrounding their abdomen, which impacts normal bowel functioning. When these abdominal muscles are tightened, McCall (2007) explained that the belly can not move in a free way and breathing is then impaired. Therefore, breathing exercises provided by yoga practice would benefit those with anxiety who experience those symptoms in particular.

Stueck and Gloeckner (2005) investigated how relaxation techniques that included elements of yoga could help students with emotional regulation and anxiety. The study consisted of 48 fifth graders who participated in fifteen 60-minute yoga sessions. Results found improvements in the students' emotional balance.

Research from Vollestad, Birkeland Nielsen & Hostmark Nielsen (2012) found that the meditation aspect of yoga, in which one works on developing the ability of the mind to concentrate and stay in the moment without distraction, has received more and more attention as a therapeutic intervention for people suffering from anxiety, among other mental health disorders. (Vollestad et al., 2012).

Yoga Modifications for Children

Malik (2008) interviewed eight certified youth yoga teachers in a study to find out potential benefits, necessary modifications and also risks of teaching yoga to children. It is recommended that most yoga postures are appropriate to begin between ages seven or

eight. According to Iyengar's findings in 1988 (cited by Malik, 2008), children have been practicing yoga for a very long time in India. In fact, in 1986, there was a movement in India in which efforts were made to include yoga in the school curriculum.

Something to be aware of when teaching children yoga is that some students might be mischievous or disruptive. Suggestions for reducing disruptive behaviors were identified in the review of the research literature. For example, Iyungar (as cited by Malik, 2008) suggests having those children act as leaders. Another idea from McNealus (2016) suggests using a yoga mat to help children understand where the body should be, too. This decreases misbehavior and getting in other children's personal space. Another suggestion from Malik (2008) is to help students who are squirrely, hyperactive or aggressive by putting that student near the instructor and reminding them that their mat is their space. Neiman (2015) recommends creating helper jobs for that child, including laying out the mats or holding up pictures of the poses. If a student is shy, instructors recommend reminding the child that it's their choice to participate, and not to pressure, but to encourage the child (Malik, 2008). For students experiencing depression or anxiety, yoga instructors recommend using meditation and partner poses (Malik, 2008).

Khalsa (as cited by Hagan & Nayer, 2014) recommends having children moo and meow while doing cow and cat postures and hissing while doing cobra. This keeps yoga fun and helps maintain a sense of humor, which Neiman (2015) agrees is important when leading children in yoga. Khalsa (as cited by Hagan & Nayer, 2014) guides children through visualization, too. While breathing in, they would imagine ocean waves coming up to shore. While breathing out, they would imagine the waves returning to the sea.

Orkin (2004) uses partner poses to help the children work together, which is great for socialization and building trust in a classroom. Neiman (2015) has a "Home Plate" and "Please Don't Run the Bases" meditation sequence that she follows, which is great for children who are sports fans. Another guided imagery sequence she follows is "The Flying Car," which combines fun and imagination. In regard to using yoga to self-calm, youth yoga instructors interviewed suggested teaching students the "take 5 breath" and "belly breathing." Other poses that have calming effects are balancing poses, forward bends, and child's pose (Malik, 2008).

Youth yoga instructors use language to help children let go of emotions, too. For example, they might say "connect with feelings and then let them go," "learn and listen to what's going on inside of you," "label it but don't become it" and "breathe through what is bothering you" (Malik, 2008). Poses that are helpful for dealing with emotions are lion's breath, child's pose and volcano pose. Poses that are recommended for getting energy out include warrior poses, volcano poses and lion's breath. Following a series of active poses, calming poses are recommended, including balancing poses, such as tree pose, forward bends, child's pose and resting pose (Malik, 2008).

Certain parts of yoga should never be done with children. This includes inversion, or upside-down poses, such as headstands, shoulder stands and handstands. Yoga in which the temperature in the room is elevated should never be practiced with children. Power yoga, which combines aerobic exercise and yoga is also not appropriate for children. Specific breath-control work, according to Prior (2005) should also not be done with children. Many instructors tell children to listen to their bodies and not force

their body to do anything. Instructors emphasize the importance of remaining calm, positive, receptive, playful and non-reactive (Malik, 2008).

In regard to yoga curriculum for children and adolescents, Iyengar suggests those creating the curriculum take into account the children's age (Malik, 2008). In the following section, existing yoga programs will be analyzed.

Existing Successful Yoga Programs for Children

Harvard professor Khalsa (Hagan & Nayer, 2014) has found that practicing yoga while at school helps children become more resilient and improves their moods. He also has found that self-regulation skills in regard to emotions and stress improve, too (Hagan & Nayer, 2014). It is because of this that it is important to look at specific yoga programs that have already been developed for children.

YogaBuds (YogaBuds, 2019) is a program designed by Chissick. The curriculum intends to address the following symptoms specifically: inattention, hyperactivity, aggression, defiant behavior, anxiety and depression. YogaBuds is used in both primary school settings and special needs schools. A young boy shared that yoga helped increase his performance in class and also helped him manage his behavior at home. The program aims to increase a child's tools for coping with stress and develop the ability to self-regulate (Malik, 2008).

Another existing program identified by Stueck and Gloeckner (2003) is called Training of Relaxation with Elements of Yoga for Children. This program focuses on teaching self-regulation strategies, including yoga postures, breathing exercises and meditation techniques. The goal of the program is to teach mindfulness to promote

self-regulation. When the program was evaluated, it was found that children who participated had a decrease in aggression, helplessness in school and a significant increase in stress coping abilities. There was also a decrease in anxiety among those students. Both parents and children, according to Stueck and Gloeckner (2003) reported independent yoga practice and breathing technique practice after the program was done.

YogaKids International (YogaKids International, 2019) has a "Tools for Schools" program, which is based on Howard Gardner's theory of multiple intelligences. The goal is to improve concentration, mental alertness and academic performance while focusing on the diverse intelligences students possess (Rich, 2010).

Another program for schools, called YogaEd, was examined by Slovacek, Turner and Pantoja (2003). In this program, students participated in the curriculum for 60 minutes per week. The researchers assessed 252 elementary school children who participated in this program and results indicated improvement in students' feelings about themselves, decreased misbehavior and academic improvements.

The Art of Yoga Project (AYP) (Harris & Fitton, 2010) was created to help girls in the California Juvenile Justice System improve lifelong wellness. In this program, yoga, visual arts and creative writing were combined in this program to create a holistic program in which girls learned to have increased self-respect, self-awareness and self-control. This program started out as a pilot program in 2003 and is now an independent 501(c)(3) nonprofit organization that serves over 500 incarcerated girls.

Holistic Life Foundation (HLF) aims to improve overall youth functioning (Mendelson, Greenberg, Dariotis, Gould, Rhodes, & Leaf, 2010). HLF specifically

mentions peer relations, stress, anxiety, and depression. Researchers (Mendelson, et al., 2010) conducted a pilot randomized controlled trial of HLF's existing yoga program for youth. They chose 97 fourth and fifth grade students to participate in a 12-week intervention. Included in the intervention were breathing techniques, guided mindfulness, and yoga-based physical movements. They chose this age group as a way to intervene a bit early to enhance students' abilities to handle stress (the transition from elementary to middle school is notoriously challenging). The results of this study suggested that

> This study supports previous research suggesting that mindfulness-based approaches may be beneficial for enhancing responses to stress among youth. In addition, our findings suggest that a school-based intervention involving mindfulness and yoga may be feasible and acceptable to youth, teachers, and school administrators in urban public schools serving chronically stressed and disadvantaged youth. (p. 10)

Furthermore, the program had a positive impact on negative responses to stress, like rumination, intrusive thoughts, and emotional arousal.

As was mentioned in the "Existing Treatment" section of this literature review, the COPE method, developed by Dacey et al. (2016) is a four-step process to helping ease anxiety in children.

The first aspect of this method is "Calming the nervous system." As was mentioned in an earlier section of this review, yoga helps relax activate the parasympathetic nervous system. In this way, the "C" in "COPE" could be yoga practice.

Dacey et al. (2016) provides different activities, like “Scrunch those Muscles” in which the child tenses as many muscles as they can, holding their breath for six seconds, then relaxing. Scripts such as “Fill the Space around You” are also included, which helps a child sit and relax their body while letting go of their thoughts.

In the “Originating an imaginative plan” stage, they offer activities that help both parents and children become better problem-solvers. This could include meditation or visualization of oneself solving problems.

The “Persisting in the face of obstacles and failure” stage of COPE highlights the importance of developing family rituals. For example, having a clear and consistent bedtime routine. ”Evaluating the plan” is just that- looking at how the plan to combat anxiety is working.

Recent research (Kokinakis, 2011) indicates that yoga-based interventions have led to a reduction in rumination, intrusive thoughts and emotional arousal in students. The researcher evaluated how meditation can impact cognitive outcomes, such as attention and working memory. The results from a five-day mindfulness program indicated that participation in this program was related to improved attention (as well as decreased stress, anxiety and depressive symptoms (Kokinakis, 2011). Another program yielded similar results. According to Benson et al., (2004) middle-schoolers who were involved in at least two semester-long meditation and relaxation classes that were led by trained teachers had higher GPAs, work habit scores and cooperation scores (Kokinakis, 2011).

Yoga, Self-Regulation and Positive Classroom Climate Connection

According to Hughes and Coplan (2017), a positive classroom climate is an indicator of academic achievement for children high in anxious solitude. Positive classroom climates include a teacher who is sensitive and emotionally supportive. By including a yoga component in a classroom, a teacher is being sensitive to their students' emotional needs, therefore contributing to a positive classroom environment.

Rogers (2011) discovered that students who practiced yoga twice a week for 20 minutes saw positive results. A child wrote in a written reflection about the program, that yoga makes you a more peaceful member of the class. This ended up increasing positivity in the classroom environment. Self-esteem improved and with it, increased confidence in individual students. The learning environment became both more engaged and meaningful (Rogers, 2011).

Research (de Manicor, 2017) suggests that children who are perfectionists, become easily flustered, have low self-esteem or want to control everything often develop anxiety. Yoga is not competitive, which benefits those students in particular because the emphasis is on how an individual feels on the inside. A classroom that includes yoga practice helps children who are perfectionists, become easily flustered, have low self-esteem or control issues relax.

Classroom climate also can impact engagement and motivation for students in a positive or negative way, with anxious students being among those most affected- either positively or negatively (Hughes & Coplan, 2017). Students who feel supported and are engaged and motivated will be more productive.

Self-regulatory skills are defined as the ability to independently monitor and adjust behavior, attention, emotion, the physical body, cognitive processes, and motivation (Ackerman, 2018). Improved self-regulation abilities can lead to better performance and more productivity in school (Zelazo & Lyons, 2011).

Self-regulation is keeping your emotions and behaviors in-check. Improved self-regulation will likely increase productivity in the classroom because emotions and behaviors will be under control, making room for learning.

Summary

Anxiety is increasingly common and can cause both social and academic issues at school. In order to reach and teach children with anxiety in the classroom, something needs to be done to decrease their anxiety to make room for learning. One strategy, yoga, is free and can be done anywhere. Yoga has many proven benefits, including research that shows a reduction of anxiety and an increase in mindfulness.

By incorporating yoga in the classroom, students with anxiety will benefit. They will learn, over time, how to use yoga to help them when they are feeling anxious, both inside and outside of the classroom. The classroom environment will likely become more positive with yoga being a part of the curriculum, and the more positive environment will contribute to the success of those students with anxiety, also.

In the following section, I will describe how and where the curriculum will be developed. The setting and participants will be described, the theory used to develop and implement the curriculum will be stated, and an outline of what the curriculum project will look like will be provided. I will explain how I will gather the information needed to

design the curriculum, all while connecting to my research question: *What are the elements of a Yoga curriculum that support learners in dealing with anxious situations?*

CHAPTER THREE

Project Rationale and Design

Introduction

This chapter will inform readers of the methods that will be used to create this yoga curriculum. The following question will guide the curriculum development: *What are the elements of a Yoga curriculum that can support learners in dealing with anxious situations?*

The first section of this chapter will focus on the foundational assumptions regarding the need and design of this curriculum. Then, the development theory "Understanding by Design" (Wiggins & McTighe, 2015) will be examined, as it was used to informally guide the development of this curriculum. After that, a description of the curriculum unit will be provided, followed by a timeline. The assessment plan will then be explained. The last section will describe the setting and participants.

Foundational Assumptions Regarding the Need and Design of This Curriculum

As a third-grade classroom teacher, I know that an easy-to-follow yoga curriculum is needed. As was previously mentioned, research (Lowe, 2000; Twenge, 2000; Merikangas, 2010; Weir, 2017) reflects how prevalent anxiety is in children. Furthermore, research also states that anxiety causes issues with academic, social and emotional success (Hughes & Coplan 2017; Lowe, 2000; Mychailyszyn et al., 2010; Green et al., 2017; Vreeke & Muris, 2012). Research (Hagan & Nayer, 2014; Malik, 2008; McNealus, 2016; Neiman, 2015; Kiecolt-Glaser et al., 2013) also shows that yoga

can be a beneficial strategy to help students cope with anxiety and anxiety-inducing situations.

As a third-grade classroom teacher, I also understand how much is on classroom teachers' plates. Teachers in elementary schools have the responsibility of teaching multiple subject areas while dealing with a group of children with a variety of needs. Multiple conversations with coworkers led me to the conclusion that something was missing from our curriculum in terms of helping students develop strategies for stress and anxiety. Reflecting on my past experience of leading children in morning yoga every day reinforced my desire to teach students how to cope with stress. Now that this curriculum project is complete, it has helped me address the lack of an easy-to-follow yoga curriculum for elementary students.

A premise of this capstone is that teachers can limit anxious behaviors and thoughts by implementing yoga and mindfulness activities in their classrooms. Research evidence supports that the integration of yoga into the learning environment, when done correctly, can result in numerous ways. Specifically, research studies (Benson et al., 2004; Hagan & Nayer, 2014; Kokinakis, 2011; Malik, 2008; McNealus, 2016; Mendelson et al., 2010; Neiman, 2015) support the idea that students engaging in yoga can be a helpful way for them to move their bodies and calm their minds . The need to create a yoga curriculum that encourages mindfulness, teaches children yoga postures, and teaches students how to breathe while incorporating parent involvement in an elementary setting is clear because of those benefits that researchers have identified.

Understanding by Design (Ubd) (Wiggins & McTighe, 2015) influenced the design process of this curriculum. I used their guiding principles to informally develop the curriculum goals. Specifically, this curriculum started by looking at the outcomes desired by the lessons. Their lesson plan format was not used, however.

Development Theory: Understanding by Design

Understanding by Design (Wiggins & McTighe, 2015) was the curriculum design model used to informally create my curriculum unit. According to Wiggins and McTighe (2015) UbD is also called Backwards Design. Backwards Design looks at the outcomes in order to design curricular units. It is logical to use this format to create a yoga curriculum because the three stages are easy to follow. Ubd helped me look at what I want my students to be able to do in terms of yoga and mindfulness practices.

UbD has three easy to follow stages. Wiggins and McTighe (2005) describe how the first stage requires the curriculum creator to establish overall understandings and essential guiding questions. Essential questions have six characteristics, according to Wiggins and McTighe (2005). While a good idea to focus on all six of the characteristics, I did not follow that. I asked myself questions, including "In what ways can I make this engaging for third graders?" and "How can I connect yoga and mindfulness to decreasing anxious feelings, and encourage students to use these two strategies to help themselves when feeling anxious?" These questions did connect to four of the six characteristics, including: transferable ideas, being able to raise additional questions, requires support or justification, and repetition. The authors of UbD highlight the importance of the curriculum designer to take time when developing their essential questions so that the

design is focused and the participants understand what they are doing and why. Constantly revisiting these guiding questions is important to do while working on the second and third stages.

Wiggins and McTighe (2005) describe the second stage as designing the assessment. According to the authors, the purpose of an assessment is to determine if students have reached the desired understanding. When creating the assessment during this stage, Wiggins and McTighe (2005) emphasize the importance of referring back to the essential questions. I kept referring back to the two questions previously mentioned. Tying instruction and the desired understandings at this stage is critical, because the assessment will be providing evidence needed to see if the curriculum is successful or not.

Multiple types of formative assessment were developed for this unit. Formative assessment are informal and completed throughout the unit. Formative assessment examples that are provided in this curriculum include 1-5 rubric check-ins and self-reflections that assess how students are responding to the yoga and mindfulness activities. Self-reflections are an important formative assessment because they give students the opportunity to reflect on how their yoga practice is making them feel. The summative assessment includes an Anxious Behaviors Checklist for teachers to complete. This requires the teacher to look at the anxious behaviors each child in the classroom is exhibiting at the beginning of the unit and end of the unit. The Stressed Strategies Checklist and Anxious Questionnaire will be completed by students at both the beginning and end of the unit, too.

Stage three, according to Wiggins and McTighe (2005), focuses on lesson planning. They stress that it is important to keep in mind extending lessons to make meaning of the content they are learning about. Students need many opportunities to infer and make generalizations on their own. For my curriculum, then, it is important for me to include a variety of activities that will encourage engagement for all students. Ideally, students need to be guided into understanding the purpose of yoga and mindfulness activities. The lessons need to be fun, accessible (not too hard), and differentiated. Learning objectives will incorporate "I will" statements, based on third grade state standards.

In summary, Understanding by Design (Wiggins & McTighe, 2015), or Backwards Design, has three stages that help the curriculum designer create their curriculum. The first stage is to create essential questions that guide the curriculum process. The second stage is to design the assessments, and the third stage is to create the lesson plans. In the following section, the curriculum unit will be discussed.

Description of Curriculum Unit

During the spring of 2019 I developed a curriculum unit for teaching my students both yoga and mindfulness strategies that could support them in decreasing their anxiety. This is a four week curriculum unit designed for use in my third grade classroom. It includes 20 lessons, each lasting approximately 10 minutes. The lesson plan template was selected due to my prior experience using it and it worked well when I was completing a pre-tenure program in my school district. I continue to use it for weekly lesson planning today.

So the design of this curriculum includes a variety of interactive activities, independent reflections, group work, assessment ideas and a variety of easy resources for teachers to pull. A primary goal of the curriculum design was to make it easy for myself and other teachers to implement. The curriculum also includes materials for parents of my students to use at home. Parent resources were added to the curriculum unit with the goal of encouraging the parents of my students to support their children doing yoga at home and make it easy for parents to participate in at home sessions.

This project was created to teach yoga to all students, but in particular to teach students with anxiety concerns to help those students socially, emotionally and educationally. Teachers who would want to incorporate various yoga and mindfulness activities could use those that feel most authentic and beneficial to them and their students, but not necessarily all the activities would need to be used.

Students will engage in a variety of cooperative learning activities. For example, students will work in small groups to create posters that show and describe different postures of yoga (Appendix J). Students will also engage in "turn and talks" and will participate in discussions. "Turn and talks" involve two students sharing their ideas and listening to each other. Doing this enables each child to have the opportunity to share their thinking.

A spreadsheet with common anxious behaviors and a space for names will be included as a pre-assessment for teachers to use to identify students who display anxious behaviors and recognize how often they display those behaviors. These common anxious behaviors were chosen based on research shared in the literature review (Dacey et al.,

2016; Weir, 2017). This same checklist can be completed at the end of the yoga unit to show a decrease in symptoms.

A pre-assessment will be created for students to complete, as well. They will answer questions about how they feel at various points during the day. For example, how do they feel when they walk into the cafeteria? How do they feel when they are about to take a math test? A stressed strategies checklist will be included in which students are able to identify strategies they use when they feel stressed or worried, too. There will be a space for students to add other strategies that they have, that are not included on the list. Both of these assessments will be completed at the end of the unit as well.

The yoga curriculum will include four weeks of engaging lessons that teach children how to do various yoga postures and how to engage in mindful breathing. Throughout the lessons, instructors will know if students are engaged by observing them. If they are supposed to be doing a certain yoga posture, they will be attempting that. If they are supposed to be closing their eyes and quietly breathing during a mindfulness activity, that is exactly what they will be doing, though some students may choose to keep their eyes open. There will be frequent "On a scale of 1-5" self check-ins, too, in which students will show how they are feeling by putting the appropriate number of fingers in front of their bodies. Teachers will be able to physically see, by how many fingers are up, how the yoga is impacting each student.

Two different guided mindfulness/meditation activities are also included that are adapted from Coombe (2017) are provided as well (Appendix F). An example of a letter

to parents is also included (Appendix I) that incorporates research while encouraging parents to try yoga at home with their children.

The following Minnesota State Standards will be identified and coincide with each lesson (Minnesota Department of Education, 2017): 3.1.2.4 Perform non-locomotor skills as the body moves into and out of balances; 3.4.4.1 Identify the role of rules and etiquette used in a variety of physical activities; 3.5.1.1 Recognize how the body and mind respond during and after physical activity participation; 3.5.2.1 Describe the challenge and personal enjoyment that comes from learning a new physical activity; 3.5.3.1 Describe characteristics of physical activities that make them personally enjoyable; 3.3.2.1 Actively participates in practice tasks with minimal teacher prompting. (Appendix B).

Timeline

The first three chapters of this capstone were developed in Fall 2018 semester. The project and writing of Chapter Four was completed during the Spring 2019 semester. The project is planned to be implemented in the Fall of 2019.

Assessment Plan: Collecting Data to Determine the Effectiveness of the Curriculum

Effectiveness of the project will be measured by anecdotal evidence from both students and families. As was mentioned previously, third grade students will also complete personal reflection questionnaires in which they answer questions about how they feel at various points throughout the day (Appendix C). They will complete this reflection on day one of the Yoga unit. These personal reflections will use a smiley face, a squiggly face, and a sad face system for answering the questions. A squiggly face or

sad face would indicate anxious or other negative feelings. The same reflection will be given the last day of the Yoga unit. Therefore, teachers will be able to look at growth.

Another way in which effectiveness of the project will be measured is with the Strategies for Stressful Situations survey (Appendix D) that will be given on day two of the Yoga unit. This survey will inform the teacher of strategies students already have for when they feel stressed. The survey will be given at the end of the Yoga unit, also. Teachers will be able to see if students feel like they have learned new strategies for dealing with stressful situations.

Teachers will complete the same anxious behaviors pre-assessment they did at the beginning of the unit for their students (Appendix A) . They will be able to compare the two spreadsheets and notice changes in anxious behaviors among their students.

Another summative assessment provided in this curriculum includes a rubric (Appendix E). Rubrics are an important summative assessment because they lay out clear expectations for the student, ranging from beginning, to developing, then proficient, and finally exemplary.

Setting and Participants

The setting where the curriculum will be used is at a large public elementary school in an urban area in the upper midwest. The school has close to 700 students. There are 36 teachers, two administrative staff, one office staff and three custodians. There is one full-time social worker and one full-time school counselor. The building is large and the classroom has sufficient space for the needs of the lessons included in the curriculum.

The primary setting is a third grade classroom. The indoor space that will be used is a tile-surface area of approximately 500 square feet of usable space. Students will have room to spread out on the two rugs in the classroom. The classroom has large windows with a view of trees, neighboring homes and grass.

Based on AY 2018/2109 the audience for my project will be 25-30 fourth grade students and their parents/guardians. In AY 2018/2019 my class reflected the overall district demographics: English language learners (34%), special education students (15%), and free and reduced lunches (70%). Ethnicities of students in the district are comprised of 33% Asian American, 30% African American, 21% Caucasian American, 14% Latino American and 2% American Indian.

In this particular school in AY 2018/2018 this school had 4 % of students identify as Asian American, 25 % are African American, 58 % are Caucasian American, 6% are Latino American and 7 % identify as multiracial. The percentage of students who are homeless is difficult to identify, since many are transient and there is not an official statistic, but according to the social worker, approximately .03 % of students at this school are homeless. 8% of students at this school are English language learners.

This school in particular has close to 700 students with about 33% qualifying for free and reduced lunch. Many students at this school are diagnosed with autism; the school includes a federal setting 3 autism program. First and second grades, along with third and fourth grades, loop. That means that students have the same teacher for two years, which builds strong relationships between the students and teacher.

Conclusion

Chapter Four will provide a final reflection on the yoga, breathing and mindfulness curriculum created using Understanding by Design for the purpose of decreasing anxiety in the elementary classroom. In Chapter Four, the process and product of developing a yoga curriculum will be examined. What I have learned as a researcher and educator will be addressed. The literature review in chapter two will be revisited. Possible implications and limitations of my project will be mentioned and analyzed.

CHAPTER FOUR

Conclusion

Introduction

The research question at hand was: *What are the elements of a Yoga curriculum that can support learners in dealing with anxious situations?* The review of the research completed for this capstone supports the conclusion that anxiety impacts many students and yoga is a strategy that can help. In Chapter Four, the process and product of developing a yoga curriculum will be examined. What I have learned as a researcher and educator will be addressed. The literature review in chapter two will be revisited. Possible implications and limitations of my project will be mentioned and analyzed. By determining the implications and limitations, has the potential to help teachers tweak the curriculum to better fit their classroom. My personal plan to use my Yoga curriculum in the future will be described as well. Chapter Four also describes how this curriculum project benefits the field of education.

Personal Growth as a Researcher

As a researcher, completing the review of the research literature confirmed my classroom experience that anxiety is present in classrooms. However, this review has also provided me with a new sense of the extent that students experience anxiety and how much it impacted students' learning. Furthermore, I now have evidence of the positive impact that participating in yoga and mindfulness activities can have on both adults and children. The research reviewed also provides strong support my goal to include moments for yoga, mindfulness, or breathing throughout the school day. I have also

gained new insights to reflect on the anxious behaviors I observe in my students and am better prepared for thinking about how to reduce those by increasing the amount of time spent doing yoga or mindfulness activities. I have long-held the belief that mental and emotional health is critical to learning in the classroom. Now that I have a body of research that supports that belief, I feel more comfortable sharing what I know with my coworkers.

Professional Knowlege Gained as a Result of Completing the Capstone

The review of the research literature examined (Lowe, 2000; McCall, 2007; Green et al., 2017) related to the impact anxiety has on academic success has highlighted for me how students with anxiety are struggling in the classroom. Research reviewed (Benson et al., 2004; Kokinakis, 2011; Rogers, 2011) for this project also supports the idea that the incorporation of mindfulness and yoga can help students with anxiety be more successful both in and out of the classroom.

A limitation of my review of the research literature was that a lack of scholarly articles related to the existence of yoga and mindfulness curriculums for use in elementary classrooms. I interpret this gap in the research literature as evidence that there is a need for the development of this type of curriculum.

Revisiting the Literature Review

The sections that proved to be the most important for my project were: Impact of Anxiety on Academics, Engaging in Yoga: Behavioral, Mental and Emotional Benefits for Children, and Yoga Modifications for Children.

The “Impact of Anxiety on Academics” section was important for this capstone because it documented just how much anxiety is impacting the academic success of children. One research study (Lowe, 2012) supports that there is an inverse relation between anxiety and academic success. Lowe (2012) also describes how children with higher levels of anxiety performed worse academically in both mathematics and reading . One of the most significant insights of Lowe’s (2012) research that students negatively impacted by anxiety do not suddenly catch up to their peers. Further, anxiety can interfere with a child’s engagement, attention, concentration and memory (Hughes & Coplan, 2017; Lowe, 2000; McCall, 2007).

The “Engaging in Yoga: Behavioral, Mental and Emotional Benefits for Children” section was also very important for this capstone. This section was important because it highlights the ways in which yoga benefits the whole child. According to Neiman (2015), yoga can be used as a tool to both stimulate and calm students. Hagan and Nayer’s (2014) research was also critical for this capstone as it provides support for how practicing yoga improves concentration in children, which results in improved academic performance.

The “Yoga Modifications for Children” section is another section that has been critical for this curriculum development. Suggestions found through research went straight into the four week curriculum. In regard to using yoga to self-calm, youth yoga instructors interviewed suggested teaching students the take 5 breath and belly breathing (Malik, 2008). Specific poses, such as balancing poses, forward bends and child’s pose were selected to be taught because research (Malik, 2008) shows they have calming effects.

Project Limitations

Even though the curriculum includes a lot of resources and ideas, it does not include everything. In other words, this four-week long curriculum is limited. If teachers only use these lesson plans, they will be missing out on many other resources that incorporate yoga and/or mindfulness. Teachers can look at my literature review at any of the programs and books that teach yoga and mindfulness to children.

Another limitation is that this curriculum is designed to be used in a third grade classroom. While it could be used easily in second, fourth and fifth grades, middle school teachers would probably have to make significant adjustments to this curriculum in order to make it engaging.

Another limitation for this Yoga curriculum is that over time, it could become out of date. As more research is done regarding yoga, children and anxiety, there could be more done to help students.

Personal Plan

My plan is to start the 2019-2020 school year with this curriculum. Our school's schedule has not been finalized but I am going to try and fit the 10-minute yoga lesson in after recess. After the four week curriculum is done, my hope is that I have student leaders lead 5-10 minute yoga sessions after recess.

Furthermore, I plan to stay up to date with research. I will revisit my curriculum every five years to assess whether there is more current research or yoga techniques that might replace certain components that are out of date.

Implications of the Capstone for Elementary Teachers and the Education Field

By creating a Yoga curriculum and making it available to educators, there is a free resource that includes a variety of lessons, surveys and assessments that will help them teach yoga and mindfulness activities to their students. Having a well-researched and developed resource like this is valuable for teachers, students and families. Elementary school teachers already spend a lot of time planning lessons for multiple subjects. They have a limited time to develop curriculum such as this. Furthermore, they might not have the knowledge in order to do so. These lessons will take no more than 10-15 minutes and can fit in as a transition between subjects, or after recess. It is ready to use and can be easily adapted for other grade levels and communities.

By creating a Yoga curriculum and making it available to educators, there is a free resource that includes a variety of lessons, surveys and assessments that will help them teach yoga and mindfulness activities to their students. Elementary school teachers already spend a lot of time planning lessons for multiple subjects. They have a limited time to develop curriculum such as this. Furthermore, they might not have the knowledge in order to do so. These lessons will take no more than 10-15 minutes and can fit in as a transition between subjects, or after recess. It is ready to use and can be easily adapted for other grade levels and communities.

This curriculum could change the way school districts view the importance of yoga and mindfulness. Currently, so much emphasis is placed on academics. This curriculum focuses on the emotional and mental aspects

As more teachers see the benefits of incorporating yoga and mindfulness into their daily schedule, they will share those benefits with coworkers. Hopefully, more teachers will begin to use the curriculum and do their own research to include yoga and mindfulness throughout their school day. As teachers continue to include yoga during their daily routine, schools and school districts will start to notice.

After receiving district-wide recognition, school districts may decide to incorporate the inclusion of yoga and mindfulness in the district curriculum. They might enforce and monitor this inclusion to benefit students.

Conclusion

This curriculum project was created as part of my pursuit of the Masters in Arts in Teaching from the Hamline University School of Education. Throughout this chapter, I reflected on the capsone process by reflecting on how I have grown as a researcher and sharing the knowledge that I have gained as an educator while answering my research question, *What are the elements of a Yoga curriculum that support learners in dealing with anxious situations?* I revisited key components of my literature review and discussed how my projects connects to it. Then, I determined limitations to the project and possible implications. I described my plan to use this curriculum shared potential benefits to the education field.

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Appendix A

Anxious Behaviors Checklist

Name	Frequently absent	Trouble initiating interactions	Not assertive	Avoid speaking in front of class	Startled by unexpected noises	Few peer relationships	Frequent stomach aches	Frequent headaches	Appear "on alert"	Shy/introverted	Say self-deprecating things
Joe		***x***				***x***	***x***				

Appendix B

Minnesota Physical Education State Standards

3.1.2.4 Perform non-locomotor skills as the body moves into and out of balances.

3.3.2.1 Actively participates in practice tasks with minimal teacher prompting.

3.4.4.1 Identify the role of rules and etiquette used in a variety of physical activities.

3.5.1.1 Recognize how the body and mind respond during and after physical activity participation.

3.5.2.1 Describe the challenge and personal enjoyment that comes from learning a new physical activity.

3.5.3.1 Describe characteristics of physical activities that make them personally enjoyable.

Appendix C

Personal Reflections

Name_____

Directions: Check off which face best shows how you feel for each situation.

How do you feel when you..			
Get to school?			
Walk into the lunchroom?			
Are about to take a test?			
Try talking to a classmate			

Is there another time when you feel stressed or anxious? Tell me about it!

_____

_____

_____

_____

_____

_____

Appendix D

Stressed Strategies Assessment

Name: _____

Strategies For When I Feel Stressed!

Strategy	Mark an "X" if you do this
Think about something happy	
Take deep breaths	
Do a yoga pose	
Get a drink of water	
Talk to someone I trust	

Do you have another strategy? Tell me about it!

_____

_____

_____

_____

_____

_____

_____

Appendix E

Mindfulness and Yoga Rubric

	Beginning (1)	Developing (2)	Proficient (3)	Exemplary (4)
Participates in Yoga Postures	Student will not try yoga posture.	Student attempts some yoga postures.	Student attempts all yoga postures.	Student attempts all yoga postures with proper form.
Student chooses preferable Yoga Postures	Student will not try any yoga postures.	Student looks to others or teacher for which yoga posture to do.	Student chooses a variety of preferred yoga postures.	Student chooses a variety of preferred yoga postures and helps others.
Student reflects on yoga practice orally or in written form	Student does not reflect on yoga practice	Student sometimes reflects on yoga practice.	Student reflects on yoga practice orally or in written form	Student reflects on yoga practice both orally and in writing

Appendix F

Mindfulness and meditation activities

Adapted from: No Worries! By Dr. Sharie Coombres

Coombres, S. (2017). *No worries.* UK: Kings Road Publishing.

Activity 1:

Step 1: Make sure you are comfortable You can sit at your spot, sit on the floor, or lie down on your back. When you feel ready, close your eyes or look at the palms of your hands. Notice your breathing. Think about how it feels to breathe in. Think about how it feels to breathe out. Try to breathe in through your nose (like this- demonstrate) and breathe out through your mouth.

Step 2: Place one hand on your stomach and focus on how it rises, or gets bigger, and then falls. When you breathe in, quietly think "in" to yourself, and when you breathe out, quietly think "and out" to yourself. Repeat 5-10 times with your class.

Step 3*a*: Concentrate on nothing but your breathing and try to let other thoughts go. If a thought comes into your mind, acknowledge it or say hello to it, and then let it pass. Breathe in, and out. In…..and out.

Step 3*b*: Now, think about a happy memory. Maybe it's a vacation? Maybe it's about an animal, or a book. Maybe think about something happy that happened with a friend. Let that memory take up all of the space in your brain.

Step 4: When you're ready, open your eyes.

Activity 2:

Step 1: Lie down on your back if you feel comfortable. Make sure you have room to stretch your arms and legs without touching anyone near you. Close your eyes if you feel ready.

Step 2: Start breathing in through your nose. Hold your breath for a few seconds, then breathe out. Notice how it feels. Take another deep breath. Fill up your belly. Imagine that your stomach is a balloon filling up with air. As you breathe out, imagine all of the air escaping.

Step 3: Stretch out your legs in front of you. Point your toes. Stretch out your arms at your sides. Stretch all the way to your fingertips. Wiggle your fingers and stretch them out.

Step 4: Now, start to tense up all of the muscles in your body. Start with your toes. Curl them over so they are clenched. Start tensing up the muscles in your ankles and tense up your whole leg. Now, tense up your stomach. Imagine someone or something is about to step on your stomach. You want to make your stomach into a hard wall.

Step 5: Now, move your arms so they are by your sides. Tense your arms, all the way from your armpits to your hands. Make your hands into fists. Bring your shoulders up around your ears.

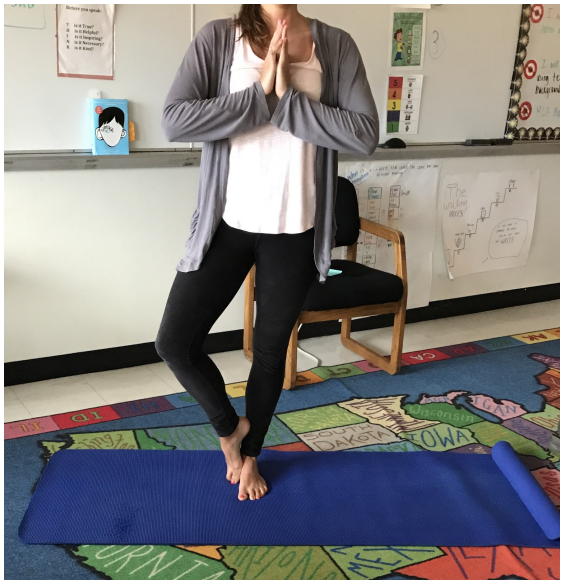
Step 6: Lastly, scrunch up your face. Make it really small. Push your lips together and frown really hard so your forehead is wrinkled up.

Step 7: Now, make your body go limp again, like a floppy ragdoll or a noodle. Let your arms and legs go loose. Relax your shoulders by bringing them down.

Step 8: Take a deep breathe in through your nose, hold it at the top, then breathe out again. Notice how your body feels. Do you feel relaxed and calm? When you're ready, open your eyes.

Appendix G

Photos of Yoga Poses



Tree pose: Option 1

Tree pose: Option 2

Tree pose: Option 3

Child's pose

Cat pose

Cow pose

Kneeling side bend with lateral stretch

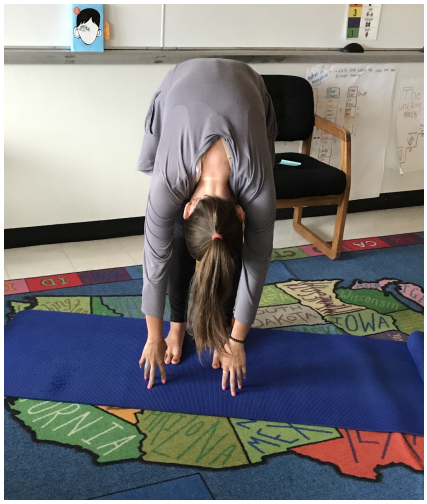
Kneeling side bend with lateral stretch

Kneeling side bend with lateral stretch

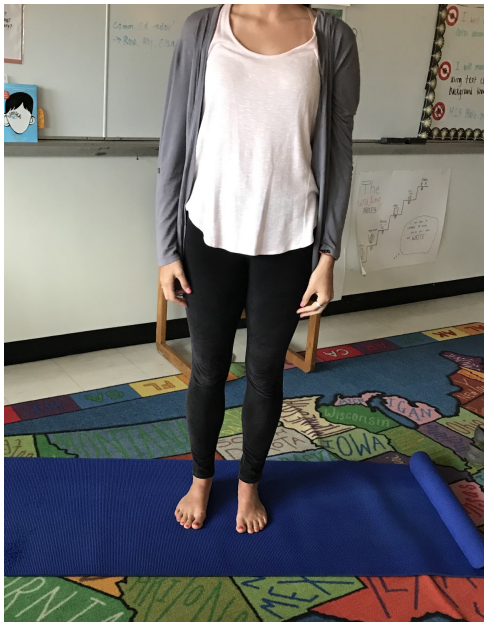
Kneeling twist

Kneeling twist

Forward fold



Forward fold



Mountain pose

Appendix H

Stressful situations activity (part 1 and part 2)

Part 1:

Scenario 1: You wake up late. Your mom tells you to hurry up and you don't get the breakfast you want.

Scenario 2: Your on your way out to recess when someone trips you. You're not sure if it's on purpose or on accident, but your leg hurts.

Scenario 3: You are about to take a test. This subject is hard for you and you want to do well.

Part 2:

Scenario 1: You have to give a presentation in front of the class. You're sitting down, watching your classmates present. You're up next.

Scenario 2: You've been away from school for a week. Everyone else has been in school but you were sick at home. You're at your locker, thinking about entering your classroom.

Scenario 3: Your pet cat is very sick. Instead of being at home with your cat, you have to be at school.

Appendix I

Dear families,

Your children will be participating in a four week long yoga and mindfulness curriculum. Each lesson will last approximately 10-15 minutes. Research shows that yoga and guided meditation are helpful strategies for coping with stress.

My hope is that after the four weeks are over, your child continues to use the breathing strategies, yoga postures and meditation practices they have learned in their everyday life.

I encourage you to ask your child to show you how to do the yoga postures and breathing strategies they are learning while in class. If interested, I have guided meditation activities and photos of the postures that I would be happy to share with you.

Thank you for your support. Please let me know if you have any questions.

Best,

Appendix J

Yoga Poster Checklist

Names: _____

We included the name of our yoga pose.	
We included a drawing of our yoga pose.	
We included at least three words that describe this pose.	
We added color and our work is neat.	